Identifying Overloaded Transformers Using GIS and Meter Information
The Question: How to identify overloaded transformers?
- Voltage complaints
- Leaks
- IR Camera
- Smoke

.... Proactively?
GIS Analysis Approach

- Summarize CIS meter data to determine demand.
- Associate demand to specific transformers.
- Identify overloaded transformers where demand is greater than rated capacity.
Analysis Project

- IS GIS data is complete and accurate?
  - Transformer size
  - Service location to transformer link

- Can the CIS data support the analysis?
  - 75% of existing accounts are matched
    - Unmatched accounts are mostly commercial, lights
    - 95% + match rate in residential areas
Analysis Project

Where is the CIS data?
Analysis Project

Where is the GIS data?
Analysis Model: OOTB ModelBuilder Functions

\[
\frac{\text{CONSUMPTION}}{230} \times \text{Power Factor}
\]

[Diagram showing data flow and equations]
Analysis Results

- Each identified transformer field verified
  - When all assumptions were valid, the analysis was 95% correct
  - False positives were reported to the GIS
Success Story

- Exposure at the executive level increased support for GIS initiatives.
- Users understand the need to maintain accurate data.
- Follow-Up GIS Projects:
  - underground project 2013
  - Address matching (CC&B) app
Success Story

OOTB ArcGIS Server functionality and Address matching application.
Questions?

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